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EXAMINER	
STACE, BRENT S	

ART UNIT	PAPER NUMBER
2161	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/610,690	LEVINE ET AL.	
	Examiner	Art Unit	
	BRENT STACE	2161	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *08 September 2009*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-3,5-15 and 20-22* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-3,5-15 and 20-22* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *26 October 2007* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Remarks

1. This communication is responsive to the amendment filed September 8th, 2009. Claims 1-3, 5-15, and 20-22 are pending. In the amendment filed September 8th, 2009, Claims 1, 11-15, 20, and 21 are amended, Claims 4 and 16-19 are canceled, and Claims 1, 11, 20, and 21 are independent Claims. This action is made FINAL.

Response to Arguments

2. Applicant's arguments filed September 8th, 2009 with respect to Claims 1-3, 5-15, and 20-22 have been considered but are not persuasive.

3. As to the applicant's arguments with respect to exemplarily Claim 1 for Duckworth allegedly not teaching "**a seed**," the examiner respectfully disagrees. "Duckworth, p. 2, "Repeating Random Numbers" with Duckworth, p. 1, "Why Psuedo?" (the indented subsection), the claimed position is the seed and random numbers are repeatable with same seed" was used to reject the first citing of "seed" in Claim 1. In the cited sections, Duckworth teaches that a seed is essentially the starting point in a list of very long values where a repeatable pattern is not discernable. Thus, the seed is a position in the list of values. As such, Duckworth teaches a seed.

4. As to the applicant's arguments with respect to exemplarily Claim 1 for Duckworth allegedly not teaching "**wherein the seed is within a range allowed by at least one parameter of the data generation module**," the examiner respectfully

disagrees. “Duckworth, p. 2, “Repeating Random Numbers” with Duckworth, p. 1, "Why Psuedo?" (the indented subsection), the list is of one million values, the seed of 123 is within the range” was used to reject this limitation. In the cited sections, Duckworth teaches that a million value list where no repeatable pattern is discernable is accessed to determine what values to generate. A seed indicates the starting position to read from this list. Setting the seed to 123 or 105,768 are all values within the one million range. One can manually initialize the seed using Rnd -1 and a parameter of “Randomize.” Setting the seed to 123 for Randomize (as taught by Duckworth) or 105,768 are all values within the one million range. Also, the parameter for Randomize must inherently have a range defined for it. For instance, if the input parameter of Randomize is a long int, the maximum value a long int must be at least 2,147,483,647. Other such boundaries exist for all other data types (e.g. signed short max is 32,767).

5. As to the applicant’s arguments with respect to exemplarily Claim 1 (including Claims 22) for Duckworth allegedly not teaching “**determining a second seed values corresponding to a second numerical position of the random sequence of values, wherein inputting the second seed value into the random data generator will output the second numerical position; inputting the second seed value; and receiving a second random number associated with the first numerical position**,” the examiner respectfully disagrees. Each limitation will be separately responded to below.

For "**determining a second seed value corresponding to a second numerical position of the random sequence of values, wherein inputting the second seed**

value into the random data generator will output the second numerical position," "Duckworth, p. 1, "Why Psuedo?" (the indented subsection) with Duckworth, p. 2, "Repeating Random Numbers" with Duckworth, p. 2 "Why Would I Want Repeating Random Numbers?" – with Randomize, any seed value can be input "By replacing 123 with a different seed value," and it is still used as a starting point into the long list of values" was used to reject this limitation. In the cited sections, Duckworth teaches changing the seed value to another value (e.g. "By replacing 123 with a different seed value"). Changing the seed value changes the starting point into the conceptual list of 1 million pseudo-random values. Thus, a second seed corresponds to a second numerical position in the list. Changing the seed position changes what value is outputted from Rnd that corresponds to the position of the value in the list. Thus, "wherein inputting the second seed value into the random data generator will output the second numerical position" is also taught by Duckworth.

For "**inputting the second seed value**," "Duckworth, p. 1, "Why Psuedo?" (the indented subsection) with Duckworth, p. 2, "Repeating Random Numbers" with Duckworth, p. 2 "Why Would I Want Repeating Random Numbers?" – done with the Randomize call" was used to reject this limitation. In the cited sections, Duckworth teaches the Randomize function used to change the seed manually. In the cited section Duckworth exemplifies changing the seed value to 123. This can be seen in the source code comments and in the sentence following the source code in the "Repeating Random Numbers" section. This is inputting the second seed value.

For "**receiving a second random number associated with the first numerical position**," "Duckworth, p. 1, "Why Psuedo?" (the indented subsection) with Duckworth, p. 2, "Repeating Random Numbers" with Duckworth, p. 2 "Why Would I Want Repeating Random Numbers?" – again, the seed is the starting point in the long list of values, where "because the starting point is unknown and the list is so long, a repeatable pattern is not discernable" was used to reject this limitation. In the cited sections, Duckworth teaches that seeding the random number generator will provide output based on the seed. As such a second random number is received. The second random number is at least associated with the first numerical position in that they are associated with the same list of 1 million pseudo-random numbers of Duckworth. Hopefully it is seen how broad "associated" can be interpreted in these claims.

6. In response to applicant's argument that there is no suggestion to combine the references (for Claims 11 and 20), the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, teaching, suggestion, or motivation to combine or modify the teachings is found in the references themselves and in knowledge generally available to one of ordinary skill in the art. Combining Gray with Duckworth offers the obvious advantage of parallelism to

get generation speedup and scaleup (Gray, p. 243, Abstract) and being able to use the data for the intended use of evaluating database system performance.

7. In response to applicant's argument that Gray is nonanalogous art, it has been held that a prior art reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the applicant was concerned, in order to be relied upon as a basis for rejection of the claimed invention. See *In re Oetiker*, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992). In this case, Gray is in the field of the applicant's endeavor (generating repeatable random data for testing a database) and is reasonably pertinent to the particular problem with which the applicant was concerned (inputting data into a database for testing database performance).

8. Any other claims argued merely because of a dependency on a previously argued claim(s) in the arguments presented to the examiner, dated September 8th, 2009, are moot in view of the examiner's interpretation of the claims and art and are still considered rejected based on their respective rejections from at least a prior Office action (part(s) of recited again below).

Response to Amendment

Claim Objections

9. In light of the applicant's respective arguments or respective amendments, some previous claim objections to the claims have been withdrawn.

Claim Rejections - 35 USC § 101

10. In light of the applicant's respective arguments or respective amendments, the previous 35 USC § 101 rejections to the claims have been withdrawn.

Claim Rejections - 35 USC § 102

11. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

12. Claims 1-5, 8, 9, 21, and 22 are rejected under 35 U.S.C. 102(b) as being anticipated by "Random Numbers" (Duckworth).

Claim 1 can be mapped to Duckworth as follows: "One or more computer-readable storage media having stored thereon a set of computer-executable instructions to perform a method for generating data, [Duckworth, p. 1, line under "How Do I Get Random Numbers?" generating random numbers in VB requires computer executable instructions to execute the functions therein, this also requires media holding the instructions] the method comprising:

- generating a plurality of collections of items of data [Duckworth, p. 1, "Why Psuedo?" (indented subsection), very long list of values must be generated at some time to be used] each time the set of computer-executable instructions are executed, wherein each of the collections comprise contents [Duckworth, p. 1,

"Why Psuedo?" (indented subsection), values] and a sequence, [Duckworth, p. 1, "Why Psuedo?" (indented subsection), starting point (e.g. first value and 105,768th value) acting as indexes] and wherein the contents of each of the collections are identical and the sequence of each of the collections are identical; [Duckworth, p. 1, "Why Psuedo?" (indented subsection), long list doesn't change, only starting point/seed can]

- accepting, as a first input, at least one of: (a) data sets and (b) data elements from which synthetic data is generated, said synthetic data having a sequence; [Duckworth, p. 1, "Why Psuedo?" (indented subsection), very long list of values contains data sets/elements, it is used to generate synthetic data (random numbers)]
- determining a position of at least one of the items of data; [Duckworth, p. 2, "Repeating Random Numbers" seed is position (e.g. 123)]
- determining a seed based upon the position, wherein the seed is used to regenerate the at least one of the items of data; [Duckworth, p. 2, "Repeating Random Numbers" with Duckworth, p. 1, "Why Psuedo?" (the indented subsection), the claimed position is the seed and random numbers are repeatable with same seed]
- receiving the seed as a second input to a deterministic data generation module, [Duckworth, p. 2, "Repeating Random Numbers", Rnd is a data generation module, one input required (or defaulted) is the seed. Seed can be set using Randomize] the seed configured to regenerate the at least one of the items of

data at a first numerical position in the sequence of the synthetic data [Duckworth, p. 2, “Repeating Random Numbers”, reading the list @ the same seed place will regenerate same data] wherein the seed is within a range allowed by at least one parameter of the data generation module, [Duckworth, p. 2, “Repeating Random Numbers” with Duckworth, p. 1, "Why Psuedo?" (the indented subsection), the list is of one million values, the seed of 123 is within the range] wherein the at least one parameter is configured to cause the data generation module to generate synthetic data, wherein the synthetic data is repeatable; [Duckworth, p. 2, “Repeating Random Numbers”, reading the list @ the same seed place will regenerate same data]

- determining a second seed value corresponding to a second numerical position of the random sequence of values, wherein inputting the second seed value into the random data generator will output the second numerical position; [Duckworth, p. 1, “Why Psuedo?” (the indented subsection) with Duckworth, p. 2, “Repeating Random Numbers” with Duckworth, p. 2 “Why Would I Want Repeating Random Numbers?” – with Randomize, any seed value can be input “By replacing 123 with a different seed value,” and it is still used as a starting point into the long list of values]
- inputting the second seed value; [Duckworth, p. 1, “Why Psuedo?” (the indented subsection) with Duckworth, p. 2, “Repeating Random Numbers” with Duckworth, p. 2 “Why Would I Want Repeating Random Numbers?” – done with the Randomize call] and

- receiving a second random number associated with the first numerical position" [Duckworth, p. 1, “Why Psuedo?” (the indented subsection) with Duckworth, p. 2, “Repeating Random Numbers” with Duckworth, p. 2 “Why Would I Want Repeating Random Numbers?” – again, the seed is the starting point in the long list of values, where “because the starting point is unknown and the list is so long, a repeatable pattern is not discernable”].

Claim 2 can be mapped to Duckworth as follows: “The one ore more computer-readable storage media as recited in claim 1, wherein the computer-executable instructions comprise a computing application” [Duckworth, p. 2, “Repeating Random Numbers”, algorithms of creating random numbers are a computing application].

Claim 3 can be mapped to Duckworth as follows: “The one ore more computer-readable storage media as recited in claim 2, wherein the computing application comprises a linear congruential generation function” [Duckworth, p. 1, “Why Psuedo?” (indented subsection) with Duckworth, p. 2, “Repeating Random Numbers”,reading a list will be linear in time, and reading it at the same seed place makes it congruential].

Claim 4 can be mapped to Duckworth as follows: “The one ore more computer-readable storage media as recited in claim 1, wherein the seed is set for each discrete data element that may be re-generated” [Duckworth, p. 2, “Repeating Random Numbers”, seed is set @ the beginning for each random number requested. Alternatively, the seed can be changed using Randomize].

Claim 5 can be mapped to Duckworth as follows: “The one ore more computer-readable storage media in claim 1, wherein the computer-executable instructions

operate to generate data in a serial fashion" [Duckworth, p. 1, line under "How Do I Get Random Numbers?" VB is a top down programming language, also Duckworth, p. 2, "Repeating Random Numbers", the list is serially accessed for each Rnd called without a new seed ("values returned will…be…the same sequence")].

Claim 8 can be mapped to Duckworth as follows: "The one ore more computer-readable storage media as recited in claim 1, wherein the first input comprises any of a range of letters, a range of numbers, a range of strings, a range of data sets, letters, numbers, strings, and data sets" [Duckworth, p. 1, "Why Psuedo?" (indented subsection) with Duckworth, p. 2, "Repeating Random Numbers", the list is a range of 1 million numbers each with a position (e.g. first value, 105,768th value)].

Claim 9 can be mapped to Duckworth as follows: "The one ore more computer-readable storage media as recited in claim 1, wherein the method further comprises:

- using a communication means [Duckworth, p. 1, "Why Psuedo?" (indented subsection) with Duckworth, p. 2, "Repeating Random Numbers", function] to communicate the synthetic data to cooperating data environments" [Duckworth, p. 2, "Repeating Random Numbers", random numbers are communicated to the computer and program].

Claim 21 can be mapped to Duckworth as follows: "A method for generating data, comprising:

- determining by at least one computer processor a random data output of a random data generator, wherein the output comprises a repeatable sequence of random numbers, wherein each of the random numbers comprises a numerical

position; [Duckworth, p. 1, “Why Psuedo?” (the indented subsection) with Duckworth, p. 2, “Repeating Random Numbers” with Duckworth, p. 2 “Why Would I Want Repeating Random Numbers?” – random numbers are output of Rnd, with the same seed the numbers are repeatable and each number is from a “very, very long list of values" that has a numerical position (e.g. “first value…105,768th value”)]

- determining by at least one computer processor a first seed value corresponding to a first numerical position of the random numbers, wherein inputting the first seed value into the random data generator will output the first numerical position; [Duckworth, p. 1, “Why Psuedo?” (the indented subsection) with Duckworth, p. 2, “Repeating Random Numbers” with Duckworth, p. 2 “Why Would I Want Repeating Random Numbers?” – the seed is the starting point into reading from the "very, very long list of values." The seed tells where to start in the list]
- inputting the first seed value; [Duckworth, p. 1, “Why Psuedo?” (the indented subsection) with Duckworth, p. 2, “Repeating Random Numbers” with Duckworth, p. 2 “Why Would I Want Repeating Random Numbers?” – “starting point” seed with e.g. the Randomize call]
- receiving a first random number associated with the first numerical position” [Duckworth, p. 1, “Why Psuedo?” (the indented subsection) with Duckworth, p. 2, “Repeating Random Numbers” with Duckworth, p. 2 “Why Would I Want Repeating Random Numbers?” – the seed is the starting point in the long list of

values, where “because the starting point is unknown and the list is so long, a repeatable pattern is not discernable”].

Claim 22 can be mapped to Duckworth as follows: "The method of claim 21, further comprising:

- determining a second seed value corresponding to a second numerical position of the random sequence of values, wherein inputting the second seed value into the random data generator will output the second numerical position; [Duckworth, p. 1, “Why Psuedo?” (the indented subsection) with Duckworth, p. 2, “Repeating Random Numbers” with Duckworth, p. 2 “Why Would I Want Repeating Random Numbers?” – with Randomize, any seed value can be input “By replacing 123 with a different seed value,” and it is still used as a starting point into the long list of values]
- inputting the second seed value; [Duckworth, p. 1, “Why Psuedo?” (the indented subsection) with Duckworth, p. 2, “Repeating Random Numbers” with Duckworth, p. 2 “Why Would I Want Repeating Random Numbers?” – done with the Randomize call] and
- receiving a second random number associated with the first numerical position.” [Duckworth, p. 1, “Why Psuedo?” (the indented subsection) with Duckworth, p. 2, “Repeating Random Numbers” with Duckworth, p. 2 “Why Would I Want Repeating Random Numbers?” – again, the seed is the starting point in the long

list of values, where "because the starting point is unknown and the list is so long, a repeatable pattern is not discernable"].

Claim Rejections - 35 USC § 103

13. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

14. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

15. Claims 6, 7, 10-15, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over "Random Numbers" (Duckworth) in view of "Quickly Generating Billion-Record Synthetic Databases" (Gray et al.).

For **Claim 6**, Duckworth teaches: "The one ore more computer-readable storage media as recited in claim 1."

Duckworth discloses the above limitation but does not explicitly teach: "…wherein the computer-executable instructions operate to generate data in a parallel fashion."

With respect to Claim 6, an analogous art, Gray, teaches: "…wherein the computer-executable instructions operate to generate data in a parallel fashion" [Gray, p. 243, Abstract and Introduction, "parallelism to get generation speedup and scaleup" and ""using parallel algorithms and execution" for "quickly generating large databases"].

It would have been obvious to one of ordinary skill in the art at the time of invention having the teachings of Gray and Duckworth before him/her to combine Gray with Duckworth because both inventions are directed towards generating random data.

Gray's invention would have been expected to successfully work well with Duckworth's invention because both inventions use random data generation. Duckworth discloses about the Rnd and Randomize function in VB comprising generating random data. However, Duckworth does not expressly disclose that data can be randomly generated in a parallel fashion or generating random data for a database having a schema for use in benchmarking. Gray discloses quickly generating billion-record synthetic databases (title) comprising using parallel functions to generate the data and inputting the data in to a database having a schema to evaluate database system performance.

It would have been obvious to one of ordinary skill in the art at the time of invention having the teachings of Gray and Duckworth before him/her to take the parallel functions and intended use from Gray and install it into the teachings of Duckworth, thereby offering the obvious advantage of parallelism to get generation

speedup and scaleup (Gray, p. 243, Abstract) and being able to use the data for the intended use of evaluating database system performance.

For **Claim 7**, Duckworth teaches: "The one ore more computer-readable storage media as recited in claim 1."

Duckworth discloses the above limitation but does not explicitly teach: "…wherein the method is performed in a database environment."

With respect to Claim 7, an analogous art, Gray, teaches: "…wherein the method is performed in a database environment" [Gray, p. 243, Title and Introduction, Gray is concerned with "generating billion-record synthetic databases"].

It would have been obvious to one of ordinary skill in the art at the time of invention having the teachings of Gray and Duckworth before him/her to combine Gray with Duckworth because both inventions are directed towards generating random data.

Gray's invention would have been expected to successfully work well with Duckworth's invention because both inventions use random data generation. Duckworth discloses about the Rnd and Randomize function in VB comprising generating random data. However, Duckworth does not expressly disclose that data can be randomly generated in a parallel fashion or generating random data for a database having a schema for use in benchmarking. Gray discloses quickly generating billion-record synthetic databases (title) comprising using parallel functions to generate the data and inputting the data in to a database having a schema to evaluate database system performance.

It would have been obvious to one of ordinary skill in the art at the time of invention having the teachings of Gray and Duckworth before him/her to take the parallel functions and intended use from Gray and install it into the teachings of Duckworth, thereby offering the obvious advantage of parallelism to get generation speedup and scaleup (Gray, p. 243, Abstract) and being able to use the data for the intended use of evaluating database system performance.

For **Claim 10**, Duckworth teaches: "The one ore more computer-readable storage media as recited in claim 1."

Duckworth discloses the above limitation but does not explicitly teach: "…wherein the synthetic data is data for use in benchmarking activities having a predefined data schema definition."

With respect to Claim 10, an analogous art, Gray, teaches: "…wherein the synthetic data is data for use in benchmarking activities having a predefined data schema definition" [Gray, p. 243, Abstract, evaluating database systems, databases have predefined data schema definition].

It would have been obvious to one of ordinary skill in the art at the time of invention having the teachings of Gray and Duckworth before him/her to combine Gray with Duckworth because both inventions are directed towards generating random data.

Gray's invention would have been expected to successfully work well with Duckworth's invention because both inventions use random data generation. Duckworth discloses about the Rnd and Randomize function in VB comprising generating random data. However, Duckworth does not expressly disclose that data

can be randomly generated in a parallel fashion or generating random data for a database having a schema for use in benchmarking. Gray discloses quickly generating billion-record synthetic databases (title) comprising using parallel functions to generate the data and inputting the data in to a database having a schema to evaluate database system performance.

It would have been obvious to one of ordinary skill in the art at the time of invention having the teachings of Gray and Duckworth before him/her to take the parallel functions and intended use from Gray and install it into the teachings of Duckworth, thereby offering the obvious advantage of parallelism to get generation speedup and scaleup (Gray, p. 243, Abstract) and being able to use the data for the intended use of evaluating database system performance.

For **Claim 11**, Duckworth teaches: "A computer-implemented method for generating data [Duckworth, p. 1, line under "How Do I Get Random Numbers?" generating random numbers] comprising:

- providing by at least one computer processor a deterministic data generation module stored on at least one medium, [Duckworth, p. 1, line under "How Do I Get Random Numbers?" Rnd is a data generation module and generating random numbers in VB requires media holding the instructions] the deterministic data generation module accepting inputs for processing [Duckworth, p. 2, "Repeating Random Numbers", one input required (or defaulted) is the seed another is the long list] to generate a plurality of data sets, [Duckworth, p. 2, "Repeating Random Numbers", each Rnd called without a new seed ("values

returned will…be…the same sequence")] each data set having synthesized data [Duckworth, p. 1, "Why Psuedo?" (the indented subsection), random numbers are synthesized data] wherein within the data set each data element has a sequence number, [Duckworth, p. 1, "Why Psuedo?" (indented subsection), starting point (e.g. first value and 105,768th value) acting as indexes] and each data set is organized such that the data is positioned from lowest sequence number to highest sequence number in a sequential fashion, [Duckworth, p. 1, "Why Psuedo?" (indented subsection), a long (1 million) list has fixed positions/sequence numbers that, how you view it will be in order from lowest to highest] and wherein the synthesized data of each data set is identical; [Duckworth, p. 1, "Why Psuedo?" (indented subsection), long list doesn't change, only starting point/seed can]

- providing by at least one computer processor a seed as input to the deterministic data generation module, [Duckworth, p. 2, "Repeating Random Numbers", one input into Rnd required (or defaulted) is the seed. Seed can be set using Randomize] the seed acting to position the deterministic data generation module to regenerate data having a predefined sequence number, [Duckworth, p. 2, "Repeating Random Numbers", reading the list @ the same seed place will regenerate same data] wherein the seed value is derived from the predefined sequence number, [Duckworth, p. 2, "Repeating Random Numbers" with Duckworth, p. 1, "Why Psuedo?" (the indented subsection), predefined sequence number is the seed] and wherein the sequence number represents a starting

point [Duckworth, p. 2, "Repeating Random Numbers", seed in starting position in long list]…wherein the seed is within a range allowed by at least one parameter of the data generation module, [Duckworth, p. 2, "Repeating Random Numbers", list of one million (range is 1 to 1million), 123 is within the range] wherein the at least one parameter is configured to cause the data generation module to generate synthetic data which is repeatable; [Duckworth, p. 2, "Repeating Random Numbers", reading the list @ the same seed place will regenerate same data] and."

Duckworth discloses the above limitations but does not explicitly teach:

- "…from which the synthetic data is used as input to process whose performance is to be evaluated
- …schematizing the synthesized data according to a predefined data schema definition."

With respect to Claim 11, an analogous art, Gray, teaches:

- "…from which the synthetic data is used as input to process whose performance is to be evaluated [Gray, p. 243, Abstract, evaluating database systems, databases have at least a process for, for example, retrieving data]
- …schematizing the synthesized data according to a predefined data schema definition" [Gray, p. 244, paragraph under section "3. Sequential database generation," when data generated it is put into the database, a data schema of the database must exists in order to know where to store the data (e.g. tables)].

It would have been obvious to one of ordinary skill in the art at the time of invention having the teachings of Gray and Duckworth before him/her to combine Gray with Duckworth because both inventions are directed towards generating random data.

Gray's invention would have been expected to successfully work well with Duckworth's invention because both inventions use random data generation. Duckworth discloses about the Rnd and Randomize function in VB comprising generating random data. However, Duckworth does not expressly disclose that data can be randomly generated in a parallel fashion or generating random data for a database having a schema for use in benchmarking nor schematizing the synthesized data according to a predefined data schema definition. Gray discloses quickly generating billion-record synthetic databases (title) comprising using parallel functions to generate the data and inputting the data in to a database having a schema to evaluate database system performance.

It would have been obvious to one of ordinary skill in the art at the time of invention having the teachings of Gray and Duckworth before him/her to take the parallel functions and intended use from Gray and install it into the teachings of Duckworth, thereby offering the obvious advantage of parallelism to get generation speedup and scaleup (Gray, p. 243, Abstract) and being able to use the data for the intended use of evaluating database system performance.

Claim 12 can be mapped to Duckworth (as modified by Gray) as follows: "The computer-implemented method as recited in claim 11, further comprising communicating the synthesized data to cooperating data environments" [Duckworth, p.

2, “Repeating Random Numbers”, random numbers are communicated to the computer and program].

Claim 13 can be mapped to Duckworth (as modified by Gray) as follows: “The computer-implemented method as recited in claim 11, further comprising changing the value of the seed” [Duckworth, p. 2, "Repeating Random Numbers", seed is changed using Randomize].

Claim 14 can be mapped to Duckworth (as modified by Gray) as follows: “The computer-implemented method as recited in claim 11, processing the synthesized data by cooperating environments as part of a benchmarking study” [Gray, p. 243, Abstract, evaluating database systems].

Claim 15 can be mapped to Duckworth (as modified by Gray) as follows: “The computer-implemented method as recited in claim 11, further comprising schematizing the synthesized data according to a predefined data schema definition” [Gray, p. 243, Title, Abstract, and Introduction, Gray is concerned with “generating billion-record synthetic databases” databases have predefined data schema definition].

For **Claim 20**, Duckworth teaches: “A method to generate repeatable synthesized data [Duckworth, p. 1, “Why Psuedo?” with Duckworth, p. 2, “Repeating Random Numbers”, random synthesized numbers can be repeatable on same seed/starting position] comprising:

- executing by at least one computer processor a deterministic data generation function to generate a plurality of data sets [Duckworth, p. 2, “Repeating Random Numbers”, each Rnd called without a new seed (“values returned will…be…the

same sequence")] corresponding to sequential numbers, [Duckworth, p. 1, "Why Psuedo?" (indented subsection), starting point (e.g. first value and 105,768th value) acting as indexes] the numbers associated with a data element of each data set, [Duckworth, p. 1, "Why Psuedo?" (indented subsection), starting point (e.g. first value and 105,768th value) acting as indexes] wherein each data element and associated number are identical in each data set; [Duckworth, p. 1, "Why Psuedo?" (indented subsection), long list doesn't change, only starting point/seed can]

- setting by at least one computer processor a seed to act as input for the deterministic data generation function [Duckworth, p. 2, "Repeating Random Numbers", Rnd is a data generation function, one input required (or defaulted) is the seed. Seed can be set using Randomize] such that the input drives the deterministic data generation function to regenerate data corresponding to a particular sequential number, [Duckworth, p. 2, "Repeating Random Numbers", reading the list @ the same seed place will regenerate same data] wherein the seed is within a range allowed by at least one parameter of the data generation function, [Duckworth, p. 2, "Repeating Random Numbers", list of one million (range is 1 to 1million), 123 is within the range] wherein the at least one parameter is configured to cause the data generation function to generate synthetic data which is repeatable, [Duckworth, p. 2, "Repeating Random Numbers", reading the list @ the same seed place will regenerate same data] wherein the seed is set for each discrete data element that may be regenerated;

[Duckworth, p. 2, "Repeating Random Numbers", seed is set @ the beginning for each random number requested. Alternatively, the seed can be changed using Randomize] and."

Duckworth discloses the above limitations but does not explicitly teach:

- "…testing performance of a system by providing said data set as input to said system and measuring behavior of said system using said data set."

With respect to Claim 20, an analogous art, Gray, teaches:

- "…testing performance of a system by providing said data set as input to said system and measuring behavior of said system using said data set" [Gray, p. 243, Abstract, evaluating database systems].

It would have been obvious to one of ordinary skill in the art at the time of invention having the teachings of Gray and Duckworth before him/her to combine Gray with Duckworth because both inventions are directed towards generating random data.

Gray's invention would have been expected to successfully work well with Duckworth's invention because both inventions use random data generation. Duckworth discloses about the Rnd and Randomize function in VB comprising generating random data. However, Duckworth does not expressly disclose that data can be randomly generated in a parallel fashion or generating random data for a database having a schema for use in benchmarking. Gray discloses quickly generating billion-record synthetic databases (title) comprising using parallel functions to generate the data and inputting the data in to a database having a schema to evaluate database system performance.

It would have been obvious to one of ordinary skill in the art at the time of invention having the teachings of Gray and Duckworth before him/her to take the parallel functions and intended use from Gray and install it into the teachings of Duckworth, thereby offering the obvious advantage of parallelism to get generation speedup and scaleup (Gray, p. 243, Abstract) and being able to use the data for the intended use of evaluating database system performance.

16. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Conclusion

17. Any prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Applicant is advised that, although not used in the rejections above, prior art cited on any PTO-892 form and not relied upon is considered materially relevant to the applicant's claimed invention and/or portions of the claimed invention.

18. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brent S. Stace whose telephone number is 571-272-8372 and fax number is 571-273-8372. The examiner can normally be reached on M-F 9am-5:30pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Apu M. Mofiz can be reached on 571-272-4080. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/BRENT STACE/
Examiner, Art Unit 2161

/Apu M Mofiz/
Supervisory Patent Examiner, Art Unit 2161